



Pest Management (595) – IPM for Organic Transition

Conservation Practice Job Sheet

Natural Resources Conservation Service - Idaho

ID- 595, JS- 22

February 2009



What is Pest Management?

Pest management is defined as “utilizing environmentally sensitive prevention, avoidance, monitoring, and suppression strategies, to manage weeds, insects, diseases, animals and other organisms that directly or indirectly cause damage or annoyance.” Effective pest management relies on the use of many tools or strategies to reduce the impacts of pests in order to meet landowner objectives.

Purpose

Pest management is applied as part of a resource management system to support one or more of the following purposes:

- Enhance quantity and quality of crops and forages grown for food and fiber.
- Minimize negative impacts of pest control on soil resources, water resources, air resources, plant resources, animal resources, and/or humans.

Integrated Pest Management - IPM

Organic production responds to site-specific conditions by integrating management functions that include cultural, biological, and mechanical practices. Integrated management will foster cycling of resources, promote ecological balance, and conserve biodiversity. IPM is an integrated approach to manage pests, and is a critical component of organic production systems. This IPM for Organic Transition practice provides an opportunity for the transitioning organic producer to develop and apply multiple management strategies that will integrate all aspects of pest management within their organic production system, with the goal of achieving organic certification.

The IPM philosophy of pest management for organic production systems involves:

1. Using cultural methods, biological controls, and other alternatives to conventional chemical pesticides.
2. Field scouting, pest forecasting, and economic thresholds to ensure that control methods are only used when necessary. Approved pest and disease controls should be used judiciously to minimize pest resistance and environmental risk.
3. An appropriate set of mitigation techniques should be considered to reduce identified environmental risks associated with organic production management activities to achieve a sustainable system.

Practice Specifications

This practice applies to all land uses where conventional farming/ranching operations are transitioning to organic. Producers eligible for this practice must have an organic system plan developed in accordance with Idaho Department of Agriculture's (ISDA) Organic Certification Program requirements, or those of another certifying agent. This organic system plan includes integrated pest management strategies. Recommended mitigating or companion practices that may complement the plan include field borders, filter strips, riparian buffers, irrigation water management, residue management, or other appropriate practices to fully address environmental

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concerns. The producer must receive organic certification by the third year.

Organic Transition Strategies for Pest Management

Over-reliance on any single pest control measure can have undesirable effects. Pest management must be integrated within the organic production system to achieve objectives. Cultural controls such as crop rotations, tillage and mowing can make the environment less suitable for pest colonization and survival. Plant varieties that have natural resistance or tolerance to insects and/or disease should be considered. Biological control involves using predatory, parasitic, and disease-causing organisms for insect pest control as well as using competitive or antagonistic organisms for weed suppression. It also includes conservation of naturally occurring beneficial insects by creating desirable habitat.

The goal of IPM is to take maximum advantage of farming and ranching practices that:

- Promote plant health (e.g., proper nutrient and irrigation water management, improvement in soil quality by using crop rotations and cover crops, prescribed grazing, etc.)
- Allow crops to escape or tolerate pest injury
- Enhance the impact of beneficial insects and other natural controls already present.

This minimizes the need for approved pest and disease controls.

Scouting

A crucial component in any IPM program is to identify the pest (insect, weed, disease, etc.). The effectiveness of both proactive and reactive pest management measures depend on correct identification. Proper monitoring (scouting) can determine pest population levels and locations within the field.

Field scouting, pest forecasting, and economic thresholds are important IPM tools for organic production systems. Descriptions of pest damage and economic thresholds can be found in the Pacific Northwest Insect Management Handbook (<http://pnwpest.org/pnw/insects>) or on the University of Idaho Pest Management website (<http://www.ag.uidaho.edu/pmc/Pests/cropPests.htm>)

On dry cropland and irrigated or non-irrigated hayland and pasture, frequency of field scouting

should be based on pest biology. On irrigated cropland, scouting should be conducted on a weekly basis and include all relevant crop stages.



Field scouting uses different techniques to classify the status of a pest population for decision-making purposes. Field scouting procedures are available for many of the major pests in Idaho. If no specific guidance is available, field sampling should be done randomly, with samples taken from across the entire field. Take at least 5 samples and preferably 25 – 30 samples per field. Sweep nets, sticky traps, and pheromone traps can be used. Leaf counts are one method for recording plant growth stages. Square-foot or larger grids laid out in a field can provide a basis for comparative weed counts.



Pest forecasting uses information or data to predict pest problems early. For example, records of rainfall and temperature are sometimes used to predict the likelihood of disease infections. Regional pest monitoring systems can complement scouting. Idaho's BEACON program and the PNW Pest Alert system provide current information on certain pest problems in the region. In addition, models have been developed, like the degree-day approach, which can help determine when scouting should begin, or when approved pest control will have the maximum effect.

Recordkeeping

Records are an important tool to track pest populations over time. Document the target pest(s), method or technique used, date and/or crop stage when used to assist with development of effective strategies. Mapping infestations over time is a good way to document scouting activities, and may help in predicting pest populations in future years.

CLIENT'S ACKNOWLEDGEMENT STATEMENT

The Client acknowledges that:

- a. An organic system plan that meets the requirements of the ISDA Organic Certification Program or other certifying agent is required. This plan should include your weed, pest and disease management plans, along with other management activities (crop rotations, soil fertility, erosion control, grazing management, etc.).
- b. The producer is encouraged to initiate contact and work directly with the ISDA or other organic certifying agent to determine the necessary steps in transitioning their land to organic production.
- c. The producer must show their record keeping system for all inputs and production activities.
- d. The producer must receive organic certification by the third year.
- e. The producer has received a copy of this practice specification and understands the contents and requirements.

Accepted by: /s/ _____ Date: _____

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SCOUTING REPORT**

Producer _____ Date _____ Time _____ am/pm

Field ID _____ County _____ Scout _____

PLANT POPULATION

Set Counts

Plants per 1/1000 of an acre*

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 Total _____ Plants/Acre _____
 _____ ÷ # Set x 1,000 _____

36" row width = 14' 6" length of row, 30" = 17' 5", 20" = 26' 2", 15" = 34' 10", 10" = 52' 3", 7" = 74' 8"

INSECTS	Plants/Set	Set Counts	Total	%	# per Plant										
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WEEDS		SOIL CONDITIONS
Grasses	(Scattered, Slight, Moderate, Severe)	Wet Moist Dry
_____ SC SL MD SV	Avg. height _____	Loose Light Crust Hard Crust
_____ SC SL MD SV	Avg. height _____	WEATHER
Broadleaves		Cool Warm Hot
_____ SC SL MD SV	Avg. height _____	Partly Sunny Cloudy Rainy
_____ SC SL MD SV	Avg. height _____	Calm Light Wind Strong Wind

DISEASES (Rating 1, 2, 3, 4 or 5)	Map (or attach map)

CROP GROWTH STAGE _____	
Comments:	

**** FORM IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. COMPLETION IS OPTIONAL.**